

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-005308**Date Inspected:** 30-Jan-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge K Pipe Beams**Summary of Items Observed:**

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

**OIW Fabrication Shop-Bay 2 (Post Heat Straightening):**

QA Inspector Brannon randomly observed OIW qualified welder Mr. Rick Hinkle ID#H49 performing heat straightening at weld joint #W3-01D hinge k pipe beam fuse section A124-3. Mr. Hinkle was observed using a temperature indicator of 1050°F to insure that the heat straightening process did not exceed 1100 °F. Cause for heat straightening due to the rolling process of the HPS 485 W 100mm in thickness and welding distortion. Heat straightening is performed by flame straightening using a portable torch mounted on a portable motor using guided tracks. Heat straightening randomly observed by QA Inspector Brannon appeared to comply with OIW's Upset Shortening Procedure (Heat Straightening) Procedure SP-006 revision 2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Mike Gregson, Mr. Rob Walters and Mr. Jose Salazar randomly monitoring the heat straightening process.

NOTE #1: QA Inspector Brannon also, observed Mr. Hinkle heat straightening in the center of the weld joint. QC Inspector Mike Gregson informed QA Inspector Brannon the OIW will perform ultrasonic testing (UT) 72 hours after heat straightening has been completed.

**OIW Fabrication Shop-Bay 2:**

QA Inspector Brannon randomly observed OIW personnel setting up hinge K pipe beam A124-8 (HPS 485 W). The complete joint penetration (CJP) weld is identified as weld joint #W3-01H. Oregon Iron Works personnel were observed tack welding run-off tabs and also setting up cooper heat system. No welding observed on the

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

complete joint penetration (CJP) during this shift.

### OIW Fabrication Shop-Bay 3:

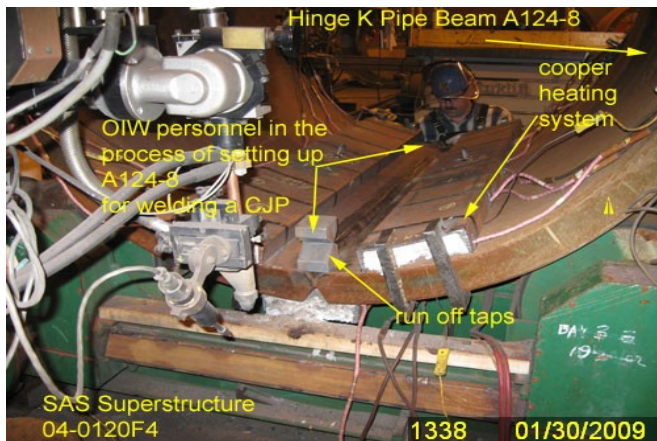
QA Inspector Brannon randomly observed OIW qualified welder Mr. Craig Jacobson ID#J6 welding a joining ring stiffener plate MK#b112 (HPS 485 W) to hinge K pipe beam A111-3 (A508 Gr. 4N Class 2). The partial joint penetration (PJP) weld is identified as weld joint #W2-10. Mr. Jacobson was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Enis-G-H21. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Mike Gregson, Mr. Rob Walters and Mr. Jose Salazar verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS 4016 revision number 0. Weld joint #W2-11 completed on this date.

QA Inspector Brannon was informed by QC Inspector Rob Walters of an 19mm in length crack in the base metal at Hinge K pipe beam A111-1 (A508 Gr. 4N Class 2) weld joint #W2-6 in the process of air carbon arc gouging and grinding. Mr. Rob Walters and Mr. Mike Gregson informed QA Inspector Brannon that OIW has not completed removing the remaining carbon and burn slag from the complete joint penetration weld. When all of the slag has been removed Quality Control will perform 100% visual inspection (VT) and magnetic particle testing (MT), if other indications are found then OIW will map the locations. QA Inspector Brannon observed no work being performed on the A111-1 (A508 Gr. 4N Class 2) weld joint #W2-6 during this shift.

### Material, Equipment, and Labor Tracking:

QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 3 Quality Control and 4 production personnel on this date.

The following digital photograph below illustrates observation of the activities being performed.



### Summary of Conversations:

As noted within this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

Materials for your project.

---

**Inspected By:** Brannon, Sherri

Quality Assurance Inspector

---

**Reviewed By:** Adame, Joe

QA Reviewer